

1. A shoe or footwear item having a sole whose outer
face (1a) is intended to come into contact with the
ground and whose inner face (2b) is intended to
come into contact with the foot of a wearer, said
sole comprising a dynamic element extending
longitudinally with respect to a longitudinal axis
(L) of the sole, on either side of said axis,
characterized in that the dynamic support element
(3; 30; 40) is positioned in the sole such that it
lies longitudinally beneath a zone corresponding to
the arch of the foot, and comprises at least two
elastically deformable components or parts
corresponding respectively to two lateral points of
bearing on the ground, which are located on either
side of the longitudinal axis (L) of the shoe for
storing and releasing energy when said sole is
subjected to lateral stress, and arranged so as to
produce an antagonist dynamic interaction between
said two deformable components when said sole is
subjected to stress.
2. The shoe as claimed in claim 1, characterized in
that the dynamic support element comprising a
spring plate (3) is positioned in the sole such as
to lie at least partially beneath a zone
corresponding to the arch of the foot, and at least
a part of the front part of the foot.
3. The shoe as claimed in claim 2, characterized in
that the two deformable components or parts are
joined or arranged on the spring plate.
4. The shoe as claimed in claim 3, characterized in
that the dynamic support element comprises at least
one set of two deformable components or parts,

- arranged on either side of a metatarsus support zone.
5. The shoe as claimed in claim 4, characterized in
5 that the spring plate (3) comprises at least four arms (4, 5, 6, 7), defining an X shape for example, each of the arms (4, 5, 6, 7) bearing on a pad (4a, 5a, 6a, 7a) constituting an elastically deformable component or part.
- 10 6. The shoe as claimed in claim 5, characterized in that each pad (4a, 5a, 6a, 7a) is an attached compressible piece.
- 15 7. The shoe as claimed in claim 5 or 6, characterized in that the spring plate (3) has a central part (8) extending transversely with respect to a longitudinal axis (L) of the sole, the arms (4, 5, 6, 7) extending obliquely toward the pads (4a, 5a,
20 6a, 7a) from said central part (8).
8. The shoe as claimed in claim 7, characterized in that the central part (8) has a transverse groove (9), located in said sole in the zone corresponding
25 to the position of the metatarsus, thus allowing elastic deformation of the spring plate (3) along an axis substantially normal to the longitudinal axis (L).
- 30 9. The shoe as claimed in any one of claims 5 to 8, characterized in that the spring plate (3) has thicker parts (3a), at least locally.
- 35 10. The shoe as claimed in claim 9, characterized in that the thicker parts (3a) are made of an elastic material and are locally thinned.

11. The shoe as claimed in any one of claims 5 to 10,
characterized in that the dynamic element is a
spring plate (3) with shape memory.
- 5 12. The shoe as claimed in any one of claims 5 to 11,
characterized in that the spring plate (3) is
fastened for example by adhesive bonding to the
inner face (1b) of the outer layer (1).
- 10 13. The shoe as claimed in any one of claims 5 to 12,
characterized in that the spring plate (3)
comprises at least one V-shaped piece.
- 15 14. The shoe as claimed in any one of claims 5 to 12,
characterized in that the spring plate (3)
comprises at least two V-shaped pieces assembled in
opposition.
- 20 15. A shoe or footwear item comprising a sole extending
in a longitudinal direction (L), from a front end
(20) to a rear end (30), whose outer face (1a) is
designed to come into contact with the ground and
whose inner face (1b) is designed to support the
25 foot directly, said sole comprising an element for
the dynamic support of the movement of the foot,
characterized in that said dynamic support element
is designed for a lateral movement of the foot in
any direction (T) transverse to the longitudinal
30 direction (L), and is arranged at least in the
front part of the foot and extends in a direction
perpendicular to the plane of the sole, or its
thickness, between the outer face (1a) (including
the latter) and the inner face (1b) (including the
35 latter) of said sole, said element comprising at
least two elastically deformable components or
parts (4a, 5a, 6a, 7a) for the front part of the

foot, arranged in the front part of the sole respectively on either side of the longitudinal direction, and aligned in the transverse direction (T), each support component being elastically deformable in a direction perpendicular to the plane of the sole, short of (compression) and beyond (expansion) a nominal position or conformation under the effect of the weight of the body, via the foot, respectively when the foot bears laterally on either of the deformable components and when said bearing force ceases.

16. The shoe as claimed in claim 15, characterized in that the deformable components or parts are independent of one another.

17. The shoe as claimed in claim 15, characterized in that the deformable components or parts are mechanically integral.

18. The shoe as claimed in any one of claims 15 to 17, characterized in that the structure of the sole is a multi-component structure.

19. The shoe as claimed in any one of claims 15 to 17, characterized in that the structure of the sole is a one-piece structure.